

MAZITOV, Shamil' Salakhutdinovich; POKOMARENKO, A.A., red.; KUCHINSKIY, V.,
red.; POLTORAK, I., tekhn.red.

[Checkrow planting of cotton] Kvadratno-gnezdovoi posev khlop-
chatnika. Stalinabad, Tadzhikskoe gos. izd-vo, 1958. 14 p.
(MIRA 12:1)

1. Zaveduyushchiy otделom mekhanizatsii nauchno-issledovatel'skogo
instituta zemledeliya Ministerstva Sel'skogo Khozyaystva Tadzhikskoy
SSR (for Mazitov).

(Cotton growing)

KOZLOVA, Lyudmila Nikolayevna; PONOMARENKO, A.A., red.; KUCHINSKIY, V.,
red.; POLTORAK, I., tekhn.red.

[Pests of the cotton plant and how to control them] Vrediteli
khlopchatnika i mery bor'by s nimi. Stalinabad, Tadzhikskoe
gos. izd-vo, 1958. 14 p. (MIRA 12:1)
(Cotton--Diseases and pests)

PETROV, Vyacheslav Fedorovich, zasluzhennyy agronom Tadzhikskoy SSR, kand.
sel'skokhozyaystvennykh nauk; KUCHINSKIY, V., red.; ~~POHOMARENKO~~
~~A.A., red.~~; POLTORAK, I., tekhn.red.

[Cultivation of cotton fields] Obrabotka khlopkovogo polia.
Stalinabad, Tadzhikskoe gos. izd-vo, 1958. 14 p. (MIRA 12:1)

1. Chlen-korrespondent Akademii nauk Tadzhikskoy SSR (for Petrov).
(Cotton growing)

KOCHETKOV, Aleksandr Petrovich; KUCHINSKIY, V., red.; PONOMARENKO, A.A.,
red.; POLTORAK, I., tekhn.red.

[Cotton irrigation] Polivnoi rezhim khlopchatnika. Stalinabad,
Tadzhikskoe gos. izd-vo. 1958. 15 p. (MIRA 12:1)
(Cotton growing) (Irrigation farming)

PONOMARENKO, Aleksandr Aleksandrovich; KUCHINSKIY, V., red.; POLTORAK, I.,
tekhn.red.

[Cotton seedbed preparation] Dopolsevnaiia obrabotka pochvy.
Stalinabad, Tadzhikskoe gos. izd-vo, 1958. 15 p. (MIRA 12:1)
(Cotton growing) (Tillage)

PETROV, Vyacheslav Fedorovich, ~~sas~~sluzhennyy agronom Tadzhikskoy SSR,
kand.sel'skokhozyaystvennykh nauk; PONOMARENKO, A.A., red.;
KUCHINSKIY, V., red.; POLTORAK, I., tekhn.red.

[Seedbed preparation and sowing of cotton] Podgotovka k sevu
i posev khlopchatnika. Stalinabad, Tadzhikskoe gos. izd-vo,
1958. 18 p. (MIRA 12:1)

1. Chlen-korrespondent Akademii nauk Tadzhikskoy SSR. (for Petrov).
(Cotton growing)

BERZIN, Avgust Ivanovich; PONOMARENKO, A.A., red.; KUCHINSKIY, V., red.;
POLTORAK, I., tekhn.red.

[Applying fertilizers to cotton plants] Udobrenie khlopchatnika.
Stalinabad, Tadshikskoe gos. izd-vo, 1958. 18 p. (MIRA 12:1)
(Cotton--Fertilizers and manures)

PONOMARENKO, A.A.; AMELINA, L.M.

Catalytic action of copper complexes of α -amino acids on the chemiluminescence of luminol and the chemiluminescent method for the microdetermination of α -amino acids. Zhur. ob. khim. 35 no.4: 750-751 Ap '65. (MIRA 18:5)

1. L'vovskiy trgovo-ekonomicheskoy institut.

L 25688-66

ACC NR: AP6016709

SOURCE CODE: UR/0079/65/035/012/2252/2253

AUTHOR: Ponomarenko, A. A.; Amelina, L. M.

ORG: L'vov Trade-Economic Institute (L'vovskiy torgovo-ekonomicheskii institut) ¹⁶ B

TITLE: Inhibition of the chemiluminescence of luminol by alpha-amino acids and the chemiluminescent method of determining micro quantities of alpha-amino acids

SOURCE: Zhurnal obshchey khimii, v. 35, no. 12, 1965, 2252-2253

TOPIC TAGS: chemiluminescence, amino acid, alanine

ABSTRACT: To develop a single stage method for the chemiluminescent analysis of amino acids, the inhibiting action of alpha-amino acids and beta-alanine on the chemiluminescence of luminol was studied in the system luminol-hydrogen peroxide-copper ammoniate. The following working solutions were used: 0.002 M solution of luminol in 0.1 M solution of NaOH, 0.001 M solution of CuSO_4 in 1% NH_4OH and 0.06 M solution of H_2O_2 . The illumination is recorded on a mirror galvanometer which registers its maximum reading. By changing the quantity of the amino acid taken, a data are obtained from which an intensity-luminescence curve is constructed. Fifteen amino acids were arranged in a series according to their inhibiting activity.

The above curves are also calibration curves for determining the concentration of amino acids by the chemiluminescent method. During quantitative analysis, the deviations of the data of the

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UDC: 547.466+620.186.2

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L 25688-66

ACC NR:

AP6016709

chemiluminescent method from the actual content of the amino acids in the solution do not exceed 5%. The sensitivity of the method is illustrated with data on certain amino acids. [JPRS]

SUB CODE: 07 / SUBM DATE: 21Jun65 / ORIG REF: 003 / OTH REF: 001

Card 2/2

I 52796-65 EWT(1) Pi-4 IJP(c)

ACCESSION NR: AP5016194

UR/0079/64/034/012/4118/4118

AUTHOR: Ponomarenko, A. A.; Popov, B. I.; Amelina, L. M.; Grishchenko, L. Y.;
Shindel', R. Ye.

TITLE: Inhibition of the chemiluminescence of luminol by additions of certain organic compounds and the utilization of this effect for analytical purposes

SOURCE: Zhurnal obshchey khimii, v. 34, no. 12, 1964, 4118

TOPIC TAGS: luminescence, alcohol, phenol, quantitative analysis, organic nitrogen compound
21

Abstract: The inhibiting action of various organic compounds on the chemiluminescent radical reaction of luminol in the system luminol -

Card 1/2

L 52796-65

ACCESSION NR: AF5016194

aminophenols, amines, nitroanilines, naphthols -- intensively suppressed
the chemiluminescence; compounds with two substituents exhibited activi-

DATE:
SUBMITTED: 28Jul64

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 003

OTHER: 001

JPRS

BAB
Card 2/2

..PONOMARENKO, A.A.; POPOV, B.I.; AMELINA, L.M.; GRISHCHENKO, L.V.;
SHINDEL', R.Ye.

Inhibition of luminol chemoluminescence by addition of certain
organic compounds and utilization of this effect for analytical
purposes. Zhur.ob. khim. 34 no.12:1118 D '64 (MIRA 18:1)

1. L'vovskiy trgovo-ekonomicheskii institut.

ZAKHARKIN, L.I.; PONOMARENKO, A.A. [deceased]; OKHLOBYSTIN, O. Yu.

Synthesis of hydrocarbon derivatives of barene. Izv. AN SSSR
Ser. Khim. no.12:2210-2212 D '64 (MIRA 18:1)

1. Institut elementoorganicheskikh soedineniy AN SSSR.

13

CA

Chlorophthalic anhydrides in glyptalic resins. A. I. Kegan and A. A. Ponomarenko. *Org. Chem. Ind. (U. S. S. R.)* 7, 382 A (1949). Various resins were prepd. by condensing at 180 and 190° tetrachlorophthalic and 4-monochlorophthalic anhydrides with glycerol or ethylene glycol. The sapon nos. of the resins calcd. from the acid nos. are close to the expd. values. The heats of activation of the reactions were calcd. and the lowest values were for the resins contg. 4-monochlorophthalic anhydride. The const. of the speed of the reaction calcd. from the binol. reaction equation were const. with resins from 4-monochlorophthalic anhydride and glycerol or ethylene glycol. Cryoscopic detns. of the mol. wts. and the relative η of 1% acetone solns. indicate that the mol. wts. do not differ greatly. B. Z. Kamich.

ASD-56A METALLURGICAL LITERATURE CLASSIFICATION

PONOMARENKO, O.A.

Simultaneous reaction of phthalic anhydride and tetrachlorephthalic anhydride with glycerin. Nauk.zap.L'viv.un 9:65-73 '48.

(MLRA 10:5)

1.Kafedra organicheskoy khimii.

(Phthalic anhydride)

(Glycerol)

PONOMARENKO, A. A.

Ponomarenko, A. A. "The effect of the partial removal of the buds of the cotton plant on its yield," Soobshch. Tadj. filiala Akad. nauk SSR, Issue 12, 1949, p. 3-7, - Bibliog: 6 items.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

PONOMARENKO, A.A.

Chlorination of 4,5-dichlorophthalic anhydride. Nauk. zap. L'viv.
un. 13:117-120 '49. (MIRA 12:10)

1. Kafedra organicheskoy khimii L'vovskogo gosudarstvennogo universiteta
imeni I. Franko.
(Phthalic anhydride)

PONOMARENKO, A.A.

N-ethylchlorophthalimide. Nauk. zap. L'viv. un. 13:121-127 '49.
(MIRA 12:10)

1. Kafedra organicheskoy khimii L'vovskogo gosudarstvennogo
universiteta imeni I. Franko.
(Phthalimide)

PONOMARENKO, A.A.; ATAMANYUK, I., student IV kursa; KADENETS, L., student IV
kursa

Certain derivatives of 3-chlorophthalimide and 3,6-dichlorophthalimide.
Nauk. zap. L'viv. un. 13:151-153 '49. (MIRA 12:10)
(Phthalimide)

CA

Preparation of monochlorophthalic anhydrides from the mononitrophthalic anhydrides. A. A. Ponomarevko (L. Franko State Univ., Lvov). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 20, 469-71 (1950).--Nitration of 250 g. tech. *o*-C₆H₄(CO)₂O with HNO₃ yielded 92 g. 3-nitrophthalic acid, m. 221-3° (sealed capillary); the latter heated 15-20 min. to 190-250° gave 3-nitrophthalic anhydride, m. 160-70°. This (22 g.) treated with dry Cl at 240-50° for 30-40 min. after cessation of the brown fumes (6-7 hrs. total) gave 15-15.5 g. 3-chlorophthalic anhydride, m. 125.5° (from C₆H₄-ligroin). Heating 200 g. *o*-C₆H₄(CO)₂O slowly to 300° with 15% NH₄OH gave 188 g. phthalimide, m. 232-4°, which (200 g.) was nitrated with mixed acid, yielding 170 g. 6-nitrophthalimide, m. 197-8°. Hydrolysis of this (80 g.) gave 82 g. 6-nitrophthalic acid, m. 164.5-7.5°, which, heated as above, gave the anhydride, and 17 g. of this, chlorinated as above, gave 10.2 g. 6-chlorophthalic anhydride, m. 98° (from C₆H₄-ligroin). Cf. Brit. 567,165 (C.A. 26, 5768). G. M. Krasolapoff

CA

10

Preparation of 3,5-dichlorophthalic acid. A. A. Ponomarenko and T. E. Matsievich (L. Frank State Univ., Lvov). *Zhur. Obshchei Khim.* (J. Gen. Chem.) **20**, 1845-7 (1950). Nitration of 132 g. tetrahydronaphthalene with 170 g. HNO_3 (d. 1.485) and 420 g. H_2SO_4 (d. 1.830) at $35-40^\circ$ gave 7.3 g. *1,2,3,4-tetrahydro-6,8-dinitronaphthalene*, m. $52-3^\circ$ (from AcOH 1:0.11). This, heated with 500 ml. 30° HNO_3 for a total of 41 hrs., cooled, and exhd. with 400 ml. hot H_2O , gave a crude acid, m. $130-50^\circ$, which, neutralized with 400 ml. satd. NaOAc and treated hot with 300 ml. satd. Ba(OAc)_2 , gave *Ba 3,5-dinitrophthalate*, yielding with H_2SO_4 20 g. of the *free acid*, m. $224-6^\circ$ (from H_2O); refluxing with 6 vols. Ac_2O 1 hr. gave the *anhydride*, m. 163° , which (4 g.), chlorinated at $235-40^\circ$, gave *3,5-dichlorophthalic anhydride*, m. $89-90^\circ$, converted by boiling with H_2O into the *free acid*, m. 164° . The chlorination process requires about 7 hrs. for a 4-g. sample.
G. M. Kosolapoff

CA

Reaction of tetrachlorophthalic and phthalic anhydrides with penterythritol. A. A. Lunomarenko (State Univ., 1. vol). *Zhur. Priklad. Khim.* (J. Applied Chem.) 23, 258-62 (1950).—Heating 2 moles of the anhydride with 1 mole of the alc. in a slow CO₂ stream at 170° and 180° was investigated kinetically; it is shown the reaction follows a bimol. course, with a 5.3-fold decrease of the reaction velocity on introduction of 4Cl atoms into the anhydride. The temp. coeff. for the anhydrides in the reaction is 1.86. The activation energies are, resp., 24,000 for tetrachlorophthalic anhydride reaction and 27,300 cal. for phthalic anhydride reaction. The mol. wts. of the resins obtained were rather low and in a 17-hr. reaction the max. value was 714. (M. Koshlapoff)

CA

10

The reaction of tetrachlorophthalic and phthalic anhydrides with pentaerythritol. A. A. Ponomarenko.
J. Appl. Chem. U.S.S.R. 23, 265-71 (1950) (Engl. translation). See *C.A.* 44, 10471.
R. M. S.

1951

POHOMARENKO, A.A.; SHTARKMAN, B.Ye.

Preparation of 3,4,6-trichloronaphthalic acid and its anhydride.
Nauk.zap.L'viv.un. 21:130-136 '52. (MIRA 10:7)

1. Kafedra organicheskoy khimii.
(Naphthaleledicarboxylic acid)

PODOMARENKO, A.A.; KOLOKOL'NIKOVA, R.I.

N-nitrophenyl-3,6-dichlorophthalimide. Nauk.zap.L'viv.un.
21:137-138 '52. (MLRA 10:7)

1. Kafedra organicheskoy khimii.
(Phthalimide)

USSR/Chemistry - Analytical 1 Sep 52

"Hydrazides of Phthalic Acid Substituents - Chemilum-
inescent Indicators," A. A. Ponomarenko, N. A. Mar-
kar'yan, A. I. Komlev, Iz'vov State U'ment Iv. Franko
"Dok Ak Nauk SSSR" Vol 86, No 1, pp 115, 116

Proposes a new type of indicator for use in acid-base
titration where the color of the soln prevents the
use of ordinary indicators. 3-Aminophthalic acid hy-
drazide (luminol) was used for the titration of 0.1
N H_2SO_4 with 0.1 N NaOH. The titration was carried

234T21

out in the dark and the end point noted when the
luminescence ceased. Luminescence would start at
pH 8.0-8.5. An alternative method of enclosing the
soln in a dark box and titrating with the aid of se-
lenium photoelec cell and a galvanometer was found to
be preferable to electrometric or conductometric
methods. Presented by Acad I. I. Chernyayev 28 Jun 52.

PONOMARENKO, A. A.

234T21

TONOMARENKO, A. A.

U S S R .

Chemiluminescence of hydrazides of substituted phthalic acids. A. A. Ponomarenko, N. A. Markaryan, and A. I. Komley (Lv. Franko State Univ., Lvov). Doklady Akad. Nauk S.S.S.R. 89, 1081-3(1953); cf. C.A. 47, 1533. The effect was detd. of concn. of indicator (0.003-0.230%), activator ($K_2Fe(CN)_6$, 0-20%), and oxidant (H_2O_2 , 0.1-3.0%) upon the intensity of the luminescence (I) of luminol in aq. soln.; optimum concns. were found to be 0.00, 2.5, and 0.3%, resp. The effect of temp. (0-80°) on such a mixt. was detd.; the max. intensity was at 20°, though the most persistent I was at 0°. Following are the pH of incipient I and the relative intensities of I in several phthalhydrazides, under these optimum conditions: 3-amino-, 8.0-8.5, 100; 4-amino-, 7.7-7.8, 4.6; 3-nitro-, 8.4-8.5, 12.0; 4-nitro-, 8.4-8.5, 1.5; 3-chloro-, 8.5-9.2, 0.222; 4-chloro-, —, 0.034; 4,5-dichloro-, 8.5-8.7, 0.292; and tetrachlorophthalhydrazide, 9.0, 0.532%. From this comparison the effect of position and substituent can be seen. Data on Cl compds. was obtained by photographic photometry; on the others, with a colorimeter. Malcolm Andersen

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PONOMARENKO, A.A.; LITVINENKO, S.P.; SOLOV'YEVA, T.Ye.; CHUCHUPAK, V.D.

Chemiluminescence method for investigating the mixing and flow
of fluids. Dop. ta pov. L'viv. un. no.5 pt.2:88-89 55.
(MLRA 9:10)

(Luminescence) (Hydrodynamics)

PONOMARENKO, A.A.

3

1/ Luminol indicator paper for detection of hydrogen peroxide. A. A. Ponomarenko (Trade-Econ. Inst. Lvov, U.S.S.R. 10, 121(1955)(Engl. translation). — Ashless filter paper was dipped in a 0.5% soln. of luminol in 0.1N NaOH. The paper is placed for a few min. in a desiccator charged with formic acid after which it is dried at 40°. To detect H₂O₂ place on the paper a drop of H₂O₂ soln., a drop of catalyst, and a drop of alkali. The presence of H₂O₂ is indicated by chemiluminescence. The preferred catalyst is an ammoniacal soln. of CuCl. By this method H₂O₂ was detected in 0.005-30% solns. The luminol paper can be used for detection of K₂Fe(CN)₆, HClO, HBrO, and KMnO₄.

M. Hough

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7/1/51

PONOMARENKO, H. H.

USSR/Chemistry - Analytical chemistry

Card 1/1 Pub. 22 - 32/62

Authors : Ponomarenko, A. A.

Title : About the chemiluminescent quantitative analysis

Periodical : Dok. AN SSSR 102/3, 539-542, May 21, 1955

Abstract : The advantages of the chemiluminescence quantitative analysis method are outlined. The possibility of applying the chemiluminescence method for the analysis of numerous substance groups and for the determination of the kinetics of comparatively rapid reaction processes is explained. Because of its high sensitivity the analysis method is referred as belonging to the group of microchemical analysis methods. By its accuracy the method corresponds, approximately, to the colorimetric method. Some results obtained by this method are listed. Six references: 4 USSR, 1 Japanese and 1 English (1948-1952). Graphs.

Institution : Trade Economical Institute, L'vov

Presented by: Academician A. N. Frumkin, January 12, 1955

PONOMARENKO, A.A.; LITVINENKO, S.P.; SOLOV'YEVA, T.Ye.; CHUCHUPAK, V.D.

Chemiluminescence method for investigating the mixing and flow of
liquids, Zav.lab.22 no.7:832-833 '56. (MLRA 9:12)
(Fluid dynamics) (Luminescence)

3
7
Chloroacetylaldehydes and phthalic anhydrides. A. A.
Ponomarev, U.S.S.R. 105314 Apr 25, 1967. NII
CaCl₂ under pressure. M. 11020

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1
0006

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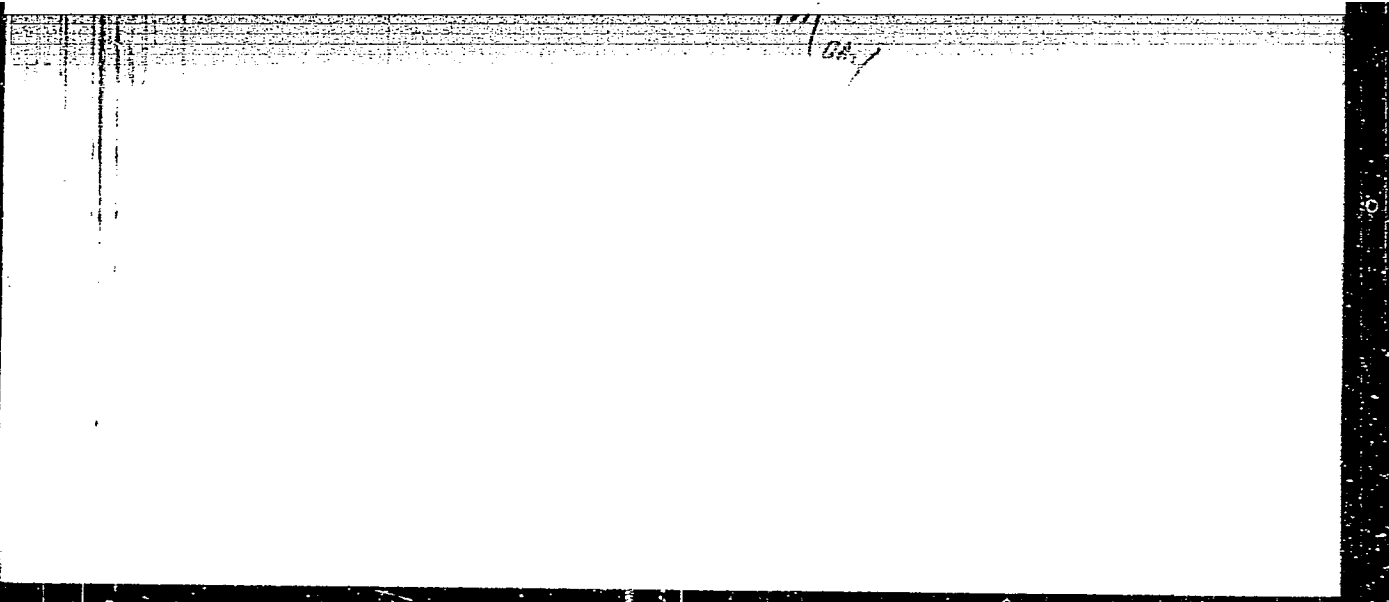
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PONOMARENKO, A.A.

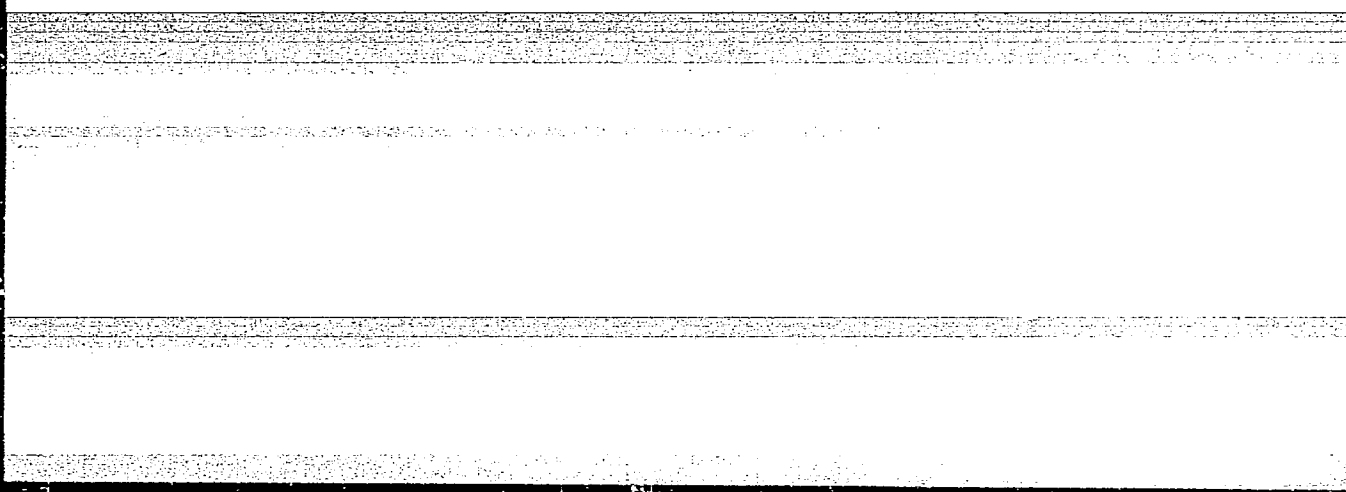
Chlorobenzene
416, Apr 26, 1961
heated w/ 100 ml
benzene

U.S.S.R. 105-
aromatic series
give chloro-
M. Huseh

454

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PONOMARENKO, A. A.

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7
Polychlorobenzene A. A. Ponomarenko, U.S.S.R. *1-4j*
105.418, Apr 27, 1968 *105.418, Apr 27, 1968*
heated with CCl_4 under pressure. M. H. Sch

on *anf*

ARKHIPETS, Ye.Ya. (Kiyev); BONDAROVICH, I.M. (Khar'kov); BULANOV, V.N. (Kiyev);
GALUSKIN, V.B. (Kiyev); GOGOTSI, G.A. (Mikolayev); GORBUNOVA, N.N.,
(Kiyev); GORLITSKIY, B.A. (Kiyev); DYADYUSHA, G.G. (Kiyev); KATSHEL'SON,
I.Ye. (Dnepropetrovsk); KVITCHUK, E.A. (Kiyev); KIRILLOV, I.A., (Krym)
KONOPLYASOVA, N.S. (Chernovtsy); NIKOL'SKIY, V.V. (Kiyev); PONOMARENKO,
A.A. (Stanislav); PESCHANSKIY, A.I. (Kiyev); POPOV, V.N. (Kiyev);
PTASHNIKOVA, I.V. (Uzhgorod); STESHENKO, N.G. (Kiyev); CHAYKIN, M.M.
(Vinnitsa); SHAPOSHNIKOVA, N.N. (Kiyev); SHPORTYUK, V.I. (Kiyev);
YANKO, N.M. (Stalinskaya oblast'); SVECHNIKOVA, N., redaktor;
SMORODSKIY, V., tekhnicheskij redaktor

[Tourist routes through the Ukraine] Turistskie marshruty po Ukraine.
Kiev, Izd-vo TsK LKSMU "Molod'," 1957. 368 p. (MLA 10:8)
(Ukraine--Description and travel)

POHOMARENKO, A.A.

Direct replacement of the nitro group in aromatic nitro-compounds by chlorine with aid of carbon tetrachloride. Ukr. khim. zhur. 24 no.1:68-72 '58. (MIRA 11:4)

1. L'vovskiy gosudarstvennyy universitet i L'vovskiy torгово-ekonomicheskiy institut.

(Carbon tetrachloride) (Nitro compounds)
(Chlorination)

5(2)

S/078/60/005/02/012/045

AUTHORS:

Ponomarenko, A. A., Shindel', R. Ye. B004/B016

TITLE:

The Reaction of Carbon Tetrachloride²¹ With Sodium Nitrite²¹

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 2, pp 306-312
(USSR)

ABSTRACT:

To investigate the direct substitution of chlorine for nitro groups in aromatic compounds by means of CCl_4 , the reaction of CCl_4 with NaNO_2 was studied. At atmospheric pressure, the reaction sets in only above 500° . In a sealed tube, it proceeds satisfactorily, however, already in the temperature range of $255-280^\circ$ (Table 1). NaCl , COCl_2 , NO_2 , NO , HOCl , and CO_2 are formed, but no free chlorine. The curve presented in figure 1 of the variation of optical density on heating gives the rate of the reaction between CCl_4 and NaNO_2 , and shows how the intermediate NO_2 is formed, concentrated and participates in the course of reaction. For comparison purposes, figure 2 gives the accumulation of NaCl in the reaction product. Figure 3 shows the rate of the reaction between CCl_4 and NaNO_2

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S/020/61/136/003/017/027
B016/B052

AUTHOR: Ponomarenko, A. A.

TITLE: The Reaction Kinetics of Direct Substitution of Chlorine for the Nitro Group in Nitrobenzene and m-Chloro-nitro-benzene During the Action of Carbon Tetrachloride

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 3, pp. 624-627

TEXT: For the direct substitution of chlorine for the nitro group in aromatic nitro compounds, the author used CCl_4 (Refs. 2-5) in nitrobenzene and m-chloro-nitro-benzene. CCl_4 has many advantages as compared to PCl_5 . The reaction kinetics was studied by a thermophotometer (formerly called thermophotocolorimeter, Ref. 6) designed by the author. The reaction is complicated since a series of successive and parallel reactions take place simultaneously. NO_2 , NO , NOCl , CO , CO_2 , H_2O , aromatic compounds containing chlorine, and some other substances were formed as inter-

Card 1/5

The Reaction Kinetics of Direct
Substitution of Chlorine for the Nitro Group
in Nitro-benzene and m-Chloro-nitro-benzene
During the Action of Carbon Tetrachloride

S/020/61/136/003/017/027 ✓
B016/B052 -

mediate and end products. I. The reaction between CCl_4 and $\text{C}_6\text{H}_5\text{NO}_2$ yielded 82% (of the theoretical) chloro-benzene, and some dichloro-benzene. NO_2 formed at the beginning, and NOCl at the end of the reaction. The substitution of chlorine for the nitro group is accompanied by the formation, accumulation, and decrease of NO_2 . Fig. 1 shows the dependence of the reaction rate on various temperatures (250 - 300°C). Fig. 2 illustrates the dependence of the period of reaction on the amount of reagents in the reaction tube. The reactions with m- and p-chloro-nitro-benzene are similar to reaction I. To explain the mechanism of the two former ones, the author gives the details of the reactions between CCl_4 and NO_2 (II), phosgene (COCl_2) and p- $\text{C}_6\text{H}_4\text{ClNO}_2$ (III), and NOCl and the latter (IV). Ad II.: Some of the reaction products were: phosgene, nitrosochloride, and chlorine: $2\text{CCl}_4 + 2\text{NO}_2 \rightarrow 2\text{COCl}_2 + 2\text{NOCl} + \text{Cl}_2$. The scheme enclosed shows two variants of this reaction which according to the author has a radical mechanism. Ad III.: 87% (of the theoretical yield)

Card 2/5

The Reaction Kinetics of Direct
Substitution of Chlorine for the Nitro Group
in Nitro-benzene and m-Chloro-nitro-benzene
During the Action of Carbon Tetrachloride

S/020/61/136/003/017/027
B016/B052

of the reaction products were isolated on p-dichloro-benzene. COCl_2 , CO_2 , and NOCl were proven in the gas. The scheme explains the reaction. Ad IV. p-dichloro-benzene, NO , NO_2 , and NOCl were found in the reaction product. The author considers this reaction to be a chain reaction, and gives its total scheme. There are 3 figures and 12 Soviet references.

ASSOCIATION: L'vovskiy trgovo-ekonomicheskii institut (L'vov Institute of Commerce and Trade)

PRESENTED: July 2, 1960, by A. V. Topchiyev, Academician

SUBMITTED: July 2, 1960

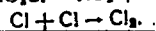
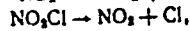
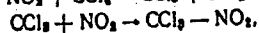
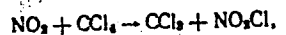
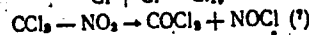
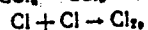
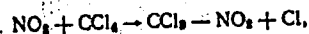
Card 3/5

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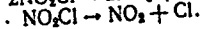
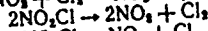
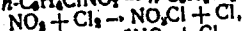
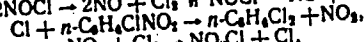
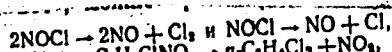
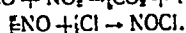
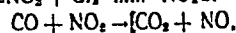
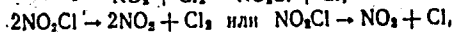
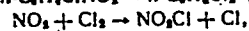
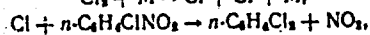
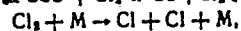
II

или



V

III



IV

Card 4/5

5.375025856
S/020/61/139/004/016/025
B 103/B206

AUTHORS: Nesmeyanov, A. N., Academician, Pelevayeva, E. G., Gubin, S. P., Nikitina, T. V., Ponomarenko, A. A., and Shilovtseva, L. S.

TITLE: Properties of phenyl ferrocene

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, No. 4, 1961, 888-891

TEXT: The authors investigated: 1) the amino methylation, 2) sulfonation, 3) concurrent (with ferrocene) acetylation, and 4) nitration of phenyl ferrocene. They established that the alkyl group, if linked with the ferrocene ring, facilitates the subsequent electrophilic substitution. In this case, the cyclopentadienyl ring to which the alkyl group is bonded, is more strongly activated. In relation to the ferrocenyl group, the phenyl group is an electron-acceptor group (A. N. Nesmeyanov et al. Ref. 5: DAN, 103, 81 (1955)). These data by the authors were confirmed by M. Rosenblum (J. Am. Chem. Soc., 81, 4530 (1959)): The electrophilic substitution of the hydrogen atoms in the ferrocene ring is deactivated by the phenyl group. 1) Amino methylation. To a mixture of 70 ml of glacial
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Properties of phenyl ferrocene

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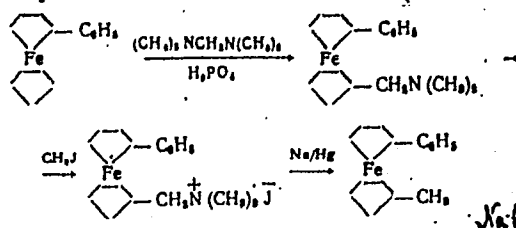
acetic acid and 4 g of H_3PO_4 , cooled to $10^{\circ}C$, 2.25 g (0.019 mole) of tetramethyldiaminoethane is gradually added, and then 4 g (0.015 mole) of phenyl ferrocene. The reaction mass was stirred for 1 hr at room temperature and for 10 hr at $110 - 115^{\circ}C$ in a nitrogen current and subsequently diluted with water to the double amount. The ferrocene (1.5 g) which had not entered into reaction was extracted with benzene. 40% NaOH solution was added to the acidic solution, and the formed (N, N-dimethylaminomethyl)-phenyl ferrocene was extracted with ether. After distilling off the ether, 2.6 g of the above-mentioned compound was obtained as a viscous, dark, reddish-brown oil. The yield amounted to 54% of the theoretical one (related to phenyl, ferrocene) and to 86% of the phenyl ferrocene reacted. The final product was distilled in vacuo. Its boiling point was $150-160^{\circ}C/3$ mm Hg; n_D^{20} 1.6315. In the infrared spectrum of the final product, weak absorption bands existed in the range 1000 and 1100 cm^{-1} . From this, the authors assume the formation of a mixture from the hetero- and homoannular isomers. The latter seems to form in small quantities. The methiodide of the final product was produced by addition of CH_3I to

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Properties of phenyl ferrocene

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a solution of 3.2 g in absolute CH_3OH (or in benzene) with precipitation after 15 min by a great amount of anhydrous ether. An almost quantitative (4.3 g) amount of methiodide was produced. It is a yellow, crystalline substance with the decomposition point $70 - 75^\circ\text{C}$. Since in the infrared spectrum of the methiodide which was produced from the distilled final product, absorption at 1000 and 1100 cm^{-1} is missing, the authors conclude that the substituting groups are in various cyclopentadienyl rings. Through reduction of the methiodide by sodium amalgam, the heteroannular 1, 1-methyl-phenyl ferrocene was obtained (see reaction no. 1).



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B103/B206

Properties of phenyl ferrocene

The yield was 1.8 g (71% of the theoretical one). Absorption at 1000 and 1100 cm^{-1} was missing in its infrared spectrum. A free cyclopentadienyl ring can only be proved spectroscopically in the substance which was isolated from the mother liquor. The authors came to the conclusion that the heteroannular isomer was the main component of the mixture produced by amino methylation. Therefore, this reaction mainly occurs in the free cyclopentadienyl ring. 2) To a solution of 10 g (0.038 mole) of phenyl ferrocene in 100 ml of dichloroethane, 10 g (0.060 mole) of freshly prepared dioxane sulfotrioxide was added while cooling with ice. Under the conditions of formation of ferrocene monosulfonic acid, 1, 1 phenyl ferrocene sulfonic acid was obtained.

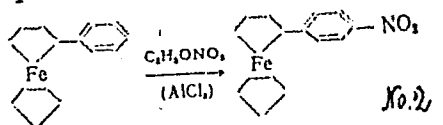
$\text{SO}_3\text{-dioxane}$
 $\text{C}_6\text{H}_5\text{C}_5\text{H}_4\text{FeC}_5\text{H}_5 \xrightarrow{\text{SO}_3\text{-dioxane}} \text{C}_6\text{H}_5\text{C}_5\text{H}_4\text{FeC}_5\text{H}_4\text{SO}_3\text{H}$. This acid was isolated as lead salt, which crystallizes with 4 water molecules. Absorption at 1000 and 1100 cm^{-1} was here also missing; the phenyl and sulfo groups are therefore in different cyclopentadienyl rings. The formation of heteroannular sulfonic acid is also proof of a lower reactivity of the ring

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S/020/61/139/004/016/025
B103/B206

Properties of phenyl ferrocene

linked with phenol. 3) The deactivating effect of the phenyl group on the ferrocenyl ring is specially marked during the Friedel-Crafts reaction. A solution of 1.4 ml of acetyl chloride and 2.66 g of $AlCl_3$ in 10 ml of absolute ether was added in the course of 20 min to a solution of ferrocene (3.72 g) and phenyl ferrocene (5.42 g) in 100 ml of CS_2 . All components were used at a molar ratio of 1:1:1:1. The authors obtained acetyl ferrocene only with a yield of 25% of the theoretical one, and a mixture of acetyl phenyl ferrocenes of only 5%, 64% of phenyl ferrocene and 30% of ferrocene being recovered unchanged. From this, the authors conclude that ferrocene may be acetylated more easily than phenyl ferrocene. 4) Phenyl ferrocene was nitrated by means of ethyl nitrate in CS_2 in the presence of $AlCl_3$. The authors obtained a 13% yield (of the theoretical one) of p-nitro-phenyl ferrocene (see reaction no. 2).



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B103/B206

Properties of phenyl ferrocene

The main quantity of this final product is isolated together with part of the nonreacted phenyl ferrocene in nonoxidized state (and not as a cation). The authors presume that nitration does not take place with the phenyl ferrocene cation but with phenyl ferrocene. The continuance of the ferrocenyl ring under these conditions is noticeable, probably as a consequence of a reduced capability of being oxidized to a cation as compared with ferrocene. Ferrocene itself cannot be nitrated under these conditions. Attempts of the authors to nitrate ferrocene with various other reagents (e. g., nitronium borofluoride) also failed. Only oxidation of ferrocene to the cation which is inert in reactions of the electrophilic substitution, was brought about. There are 9 references: 7 Soviet-bloc and 3 non-Soviet-bloc. One reference to English-language publications is given in the body of the abstract, the another one reads: M. Rosenblum, R. B. Woodward, J. Am. Chem. Soc., 80, 5443 (1958)).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 19, 1961

Card 6/6

PONOMARENKO, A. A.

Direct substitution of a nitro group by halogen in aromatic and heterocyclic nitro compounds. Part 1: Reaction of o-chloro-nitrobenzene with carbon tetrachloride. Zhur. ob. khim. 32 no.12:4029-4035 D '62. (MIRA 16:1)

1. L'vovskiy trgovo-ekonomicheskoy institut.

(Nitrobenzene) (Carbon tetrachloride)
(Nitro group)

PONOMARENKO, A. A.

Direct substitution of a nitro group by halogen in aromatic and heterocyclic nitro compounds. Part 2: Preparation of m-dichlorobenzene and m-chloronitrobenzene from m-dinitrobenzene. Zhur. ob. khim. 32 no.12:4035-4038 D '62.
(MIRA 16:1)

1. L'vovskiy trgovo-ekonomicheskii institut.

(Benzene) (Nitro group) (Halogen)

PONOMARENKO, A. A.; TSYBINA, N. A.

Direct substitution of a nitro group by halogen in aromatic and heterocyclic nitro compounds. Part 3: Substitution of a nitro group by chlorine in m-nitrobenzonitrile by means of carbon tetrachloride. Zhur. ob. khim. 32 no.12:4038-4040 D '62. (MIRA 16:1)

1. L'vovskiy torgovo-ekonomicheskii institut.

(Benzonitrile) (Nitro group)
(Carbon tetrachloride)

PONOMARENKO, A.A.

Direct substitution of the nitro group in aromatic nitro compounds by chlorine with the aid of chlorine-containing carbon compounds. Dop. AN URSR no.6:787-790 '63 (MIRA 17:7)

1. L'vovskiy trgovo-ekonomicheskii institut. Predstavleno akademikom AN UkrSSR A.I. Kiprianovym.

SHINDEL', R.Ye.; PONOMARENKO, A.A.

Determination of nitrobenzene in the presence of carbon
tetrachloride. Zhur.anal.khim. 18 no.4:525-528 Ap '63.
(MIRA 16:6)

1. Lvov Commercial-Economic Institute.
(Nitrobenzene) (Carbon tetrachloride) (Polarography)

PONOMARENKO, A.A.; AMELINA, L.M.

Determination of small quantities of phenols by the chemiluminescent method. Zhur.anal.khim. 18 no.10:1244-1249 O '63. (MIRA 16:12)

1. Commercial-Economic Institute, Lvov Institute, Lvov.

ZAKHARKIN, L.I.; STANKO, V.I.; BRATTSEV, V.A.; CHAPCOVSKIY, Yu.A.;
KLIMOVA, A.I.; OKHLOBYSTIN, O. Yu.; PONOMARENKO, A.A. [deceased]

Synthesis and study of the properties of a new class of organoboron
compounds: $B_{10}C_2H_{12}$ ("baren") and its derivatives. Dokl. AN SSSR
155 no. 5:1119-1122 Ap '64. (MIRA 17:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
Predstavleno akademikom A.N. Nesmeyanovym.

PONOMARENKO, A.A.

Chamoluminescent quantitative analysis. Trudy MOIP. Otd. bioi.
21:165-169 '65. (MIRA 18:6)

ACC NR: AP7006787

SOURCE CODE: UR/0073/66/032/012/1357/1360

AUTHOR: Svirskiy, L. D.; Ponomarenko, A. D.

ORG: Kharkov Polytechnic Institute im. V. I. Lenin (Khar'kovskiy politekhnicheskii institut)

TITLE: Enamel coatings on steel with high protective properties

SOURCE: Ukrainskiy khimicheskii zhurnal, v. 32, no. 12, 1966, 1357-1360

TOPIC TAGS: enamel, protective coating, metal diffusion

ABSTRACT: A new method is proposed for preparing protective enamel coatings on steel which are characterized by a marked heat resistance, a high chemical stability, great hardness, and a high strength of bonding to the metal. The method involves diffusion of aluminum ions into regular-type enamels, the diffusing medium employed being molten aluminum. Forming of these coatings takes place at relatively low temperatures (850-900°). This excludes any impairment of the properties of the metal, as would be the case with many heat-resistant coatings at temperatures of 1200° and above. Preliminary analysis of the composition of the surface layers on the enamels by x-ray diffraction and petrographic methods showed these layers to consist of crystalline substances whose melting points ranged from 1550 to 1600°. Orig. art. has: 3 figures and 3 tables.

SUB CODE: 11/ SUBM DATE: 11Jan65/ ORIG REF: 002/ OTH REF: 003

Card 1/1

UDC: 666.293

L 28462-66 EWP(e)/EWT(m)/EWP(t)/ETI IJP(c) JD/WH/WH

ACC NR: AT5027955

SOURCE CODE: UR/0000/65/000/000/0187/0190

AUTHOR: Svirskiy, L. D.; Ponomarenko, A. D.

ORG: none

TITLE: Protective coatings of metals using enamels with low temperature of formation

SOURCE: Seminar po zharostoykim pokrytiyam. Leningrad, 1964. Zharostoykiye pokrytiya (Heat-resistant coatings); trudy seminara. Leningrad. Izd-vo Nauka, 1965, 187-190

TOPIC TAGS: aluminum, refractory coating, oxidation, high temperature oxidation, steel/ St. 3 steel

ABSTRACT: A method is outlined for producing from conventional enamels at a relatively low temperature an oxidation- and heat-resistant coating by saturating the surface layer of the enamel with Al ions. The ion radius of Al is small. This makes it sufficiently mobile from the point of view of diffusion to reduce some metal oxides and to form an Al_2O_3 -containing refractory surface layer

Card 1/3

L 28462-66

ACC NR: AT5027955

capable of withstanding high-temperature oxidation. Acid-resistant ground enamels (SiO_2 48.2; Al_2O_3 8.66; CaO 0.38; Na_2O 22.53; K_2O 1.2; B_2O_3 10.82; CaF_2 5.0; CaO 0.73; Na_2SiF_6 2.48 %) and finishing enamels (SiO_2 58.0; Al_2O_3 4.4; CaO 2.8; Na_2O 18.0; K_2O 4.3; CaF_2 1.9; ZnO 1.5; B_2O_3 1.5; TiO_2 6.6; Cr_2O_3 1.0 %) were used as initial materials. The refractory materials (10%) were added during grinding of the granules of these enamels. The Al_2O_3 was ground into ground enamel and either Cr_2O_3 , MgO , ZrO_2 , ZnO , Al_2O_3 , talc, or quartz glass was ground into finishing enamel. The procedure did not require any noticeable increase in the baking temperature, which was 900C for ground enamels and 880C for finishing enamels. The samples (plates made of St. 3 steel) coated with these enamels were subjected for 2 hours to the action of molten Al at 750-800C. A diffusion layer 50-70 μ thick was formed on the enamel surface. The diffusion layer was separated from the object by the dissolving the metal and enamel-base layer in 40% HF solution. A preliminary study of its composition showed that it contained metallic Si and corundum, and that it was a substance of the cermet type having a melting point of 1600C. These diffusion layers were electroconductive and heated up if connected with an electric current. The coatings possessed good protective properties against gas corrosion. Their corrosion resistance could be increased by increasing both the time of exposure to molten Al and the temperature of molten Al. These protective coatings possessed a very high resistance to the action of liquid

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ACC NR: AT5027955

Al, Zr, Pb, and Sn, as well as a high chemical stability under the action of alkalies and acids including HF. The coatings had a very high microhardness ($\leq 1000 \text{ kg/mm}^2$) and good adhesion to metal. Orig. art. has: 3 fig. and 1 table.

SUB CODE: 11/ SUBM DATE: 20Jul65/ ORIG REF: 002/ OTH REF: 004

Card 3/3 *LC*

GEORGIYEVSKIY, Nikolay Petrovich; PONOMAREV, A.D., red.; ARNOL'DOVA,
K.S., red.isd-va; KOBYUSHINA, A.S., tekhn.red.

[Increasing the productivity of forests] Povyshenie produktivnosti
lesov. Moskva, Goslesbunizdat, 1960. 35 p. (MIRA 13:7)
(Forests and forestry)

SVIRSKIY, L.D.; PONOMARENKO, A.D.

Enamel base protective coatings for structural. Advst. mat. 18.00.42
87 Ap '65. (MIRA 18:5)

ACCESSION NR: AP5009745

AUTHOR: Svirskiy, L. D.; Ponomarenko, A. D.

38
B

TITLE: Protective enamel base coating

SOURCE: Tsvetnyye metally, no. 4, 1965, 87

TOPIC TAGS: protective coating, enamel, protective coating, metal structural part protection

ABSTRACT: The problem of producing protective coatings by impregnating ordinary enamels with aluminum ions in order to protect metal structures against the action of water on ferrous metals was studied. The low-carbon steel specimens were

L 44795-65

ACCESSION NR: AP5009745

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT,MM

NO REF SOV: 000

OTHER: 000

ATD PRESS: 3256

ACCESSION: NR: AR4014555

S/0276/63/000/012/B091/B091

SOURCE: RZh. Tekhnologiya mashinostroyeniya, Abs. 12B614

AUTHOR: Ponomarenko, A. D.; Svirskiy, L. D.

TITLE: A method for producing protective enamel thermal diffusion coatings with special properties

CITED SOURCE: Tr. Khar'kovsk. Politekh. in-ta, v. 45, 1963, 64-70

TOPIC TAGS: enamel, thermal diffusion, heat diffusion, heat resistant enamel, refractory enamel, aluminum

TRANSLATION: Results are given of research on the possibility of producing a heat resistant enamel layer on steel by means of treatment of a preliminarily obtained enamel (which, however does not have heat resistance and other special properties) in melted aluminum by diffusion of the latter in the enamel layer.

DATE ACQ: 09Jan64

SUB CODE: MA, EL

ENCL: 00

Cord 1/1

PROKHOROV, Stepan Ivanovich, kand. ekon. nauk; PONOMARENKO, A.D., red.;
BRULIKOVSKAYA, R.G., tekhn. red.

[Essays on the economics of the machinery industry in the
Gor'kovskoye District] Ocherki ekonomiki mashinostrotel'noi
promyshlennosti Gor'kovskogo raiona. [Gor'ki] Gor'kovskoe
knizhnoe izd-vo, 1957. 195 p. (MIRA 11:10)
(Gor'kovskoye District--Machinery industry)

ZISLIN, S.G.; MOZOKHIN, N.G.; PELYUSHENKO, O.I.; CHERNOMASHENTSEV, A.I.;
YAKUBOVICH, I.Ye.; BORISOV, N.I., glavnyy konstruktor, otvetstvennyy
redaktor; PONOMARENKO, A.D., redaktor; ZAKHAROV, K.A., tekhnicheskiy
redaktor

[GAZ-69 and GAZ-69A automobiles; a description of their construction,
adjustment, and maintenance] Avtomobili GAZ-69 i GAZ-69A; opisanie
konstruktsii, regulirovka i ukhod. Gor'kii, Gor'kovskoe knizhnoe
izd-vo, 1956. 317 p. (MIRA 10:2)

1. Avtozavod, im. Molotova (for Borisov)
(Automobiles)

ПОНОМАРЕНКО, А.Д.

SMORGONSKIY, Vladimir Yakovlevich, kand.tekhn.nauk; PONOMARENKO, A.D., red.;
NEMCHENKO, L.I., tekhn.red.

[Fundamentals of ultrashort wave engineering] Osnovy tekhniki
ul'trakorotkikh voln; kurs lektsii. [Gor'kii] Gor'kovskoe knizhnoe
izd-vo, 1957. 88 p. (MIRA 11:3)
(Wave guides) (Electric resonators)

PONOMARENKO, A.F.

Insecticides

Chemical method for controlling pests in spot-seeded plantings of oak. Les khoz No 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, August 1952⁶² Unclassified.

PONOMARENKO, A.G.

Origin of metal reguluses in slag. [Sbor. trud.] Nauch.-issl.
inst.met. no.4:96-100 '61. (MIRA 15:11)
(Iron alloys—Metallurgy)
(Slag)

S/118/63/000/001/002

AUTHOR: Popov, A. N., Engineer and Ponomarenko, A. G., Engineer

TITLE: Overall automation of the roughing stand on a 1200 rolling mill

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, ¹⁷⁻no. 1, 1963, 3-7

TEXT: Before automation all units of the 1200 rolling mill in the Novolipetskiy metallurgicheskiy zavod (Novolipetsk Metallurgical Plant) for producing 3-12 mm plate from slabs 3.9 m long, 120-180 mm thick, 600-1030 mm wide, and weighing 1.5 to 4 tons (a two-row continuous furnace for heating slabs with two pushers, a general-purpose reversing 1200 rolling mill with 75-850 mm working rolls, and 60-ton guillotine shears) were controlled by 1 or 2 operators. Now the entire technological process, up to delivery to the finishing stand, is automated. The command circuitry controlling sequence of operations is governed by counting the number of passes, according to the type of slabs used; the beginning and end of rolling is fixed, starting and stopping roll tables is programmed, manipulating lines are switched on and off, descaling is automated, and pushers are switched on when rolling is completed. The basic device ensuring operation of the circuitry is a transducer for sensing the presence of metal in the rolls consisting of a double-coiled static current relay in the main drive circuit. A ФРС-58 (FRS-58) photoelectric relay controls the position of the metal during rolling. The circuitry ensures a general accuracy of ± 0.5

Card 1 of 2

S/118/63/000/001/001/002

Overall automation of the

mm in setting the rolls and ± 0.1 mm for the last two passes. Detailed descriptions of sequences of operations, circuitry, and control devices were given and 4 figures showed circuitry and vital units. The scheme provides for operator intervention in controlling individual units without disrupting the general program.

Continued

Card 2 of 2

PONOMARENKO, A.G.

Systematic position of *Coptoclava longipoda* Ping (Insecta,
Coleoptera). Paleont.zhur. no.3:67-72 '61. (MIRA 15:2)

1. Paleontologicheskii institut AN SSSR.
(Beetles, Fossil)

PONOMARENKO, A.G.

Adaption of Mesozoic and contemporary beetles' larva to aqueous life.
Biol.MOIP.Otd.geol. 36 no.6:117 N.D '61. (MIRA 15:7)
(Beetles)

AYZENBERG, Ye.Ye.; BEKKER-MIGDISOVA, Ye.E.; VISHNYAKOVA, V.N.;
DANILEVSKIY, A.S.; MARTYNOVA, O.M.; NOVOZHILOVYY, N.I.;
PONOMARENKO, A.G.; POPOV, Yu.A.; RODENDORF, B.B.; CHERNOVA,
O.A.; SHAROVYY, A.G.; ORLOV, Yu.A., glav. red.; MARROVSKIY,
B.P., zam. glav. red.; RUZHENTSEV, V.Ye., zam. glav. red.;
SOKOLOV, B.S., zam. glav. red.; OSIPOVA, L.S., red. izd-va;
MAKUNI, Ye.V., tekhn. red.

[Fundamentals of paleontology; reference book in 15 volumes
for paleontologists and geologists of the U.S.S.R.] Osnovy
paleontologii; spravochnik dlia paleontologov i geologov
SSSR v piatnadsati tomakh. Glav. red. IU.A.Orlov. Moskva,
Izd-vo Akad. nauk SSSR. Vol.9. [Arthropoda: Tracheata,
Chelicerata] Chlenistonogie: trakheinye i khelitsery. Otv.
red. toma B.B.Rodendorf. 1962. 559 p. (MIRA 16:3)
(Arthropoda, Fossil)

PONOMARENKO, A.G.

Paleozoic beetles Cupedidea of the European part of the U.S.S.R.
Paleont.zhur. no.1:70-85 '63. (MIRA 16:4)

1. Paleontologicheskii institut AN SSSR.
(Beetles, Fossil)

PONOMARENKO, A.G.

Early Jurassic water beetles from the Angara River (Ust'-Baley).
Paleont. zhur. no.4:128-131 '63. (MIRA 17:1)

1. Paleontologicheskii institut AN SSSR.

PONOMARENKO, A.G.

New beetles of the family Cupepidae from the Jurassic deposits
of the Karatau. Paleont. zhur. no.2:49-62 '64. (MIRA 17:7)

1. Paleontologicheskii institut AN SSSR.

ISKOL'DSKIY, A.M.; KURTULLAYEV, R.Kh.; NESTERIKHIN, Yu.Ye.; PONOMARENKO, A.G.

Experiments on a collisionless shock wave in a plasma. Zhur. eksp. i
teor. fiz. 47 no.2:774-776 Ag '64. (MIRA 17:10)

1. Institut yadernoy fiziki Sibirskogo otdeleniya AN SSSR.

L 52353-65 EWP(m)/EPF(n)-2/EPR/EPA(w)-2/EWA(h)/EWA(c)/EWT(l)/FCS(k)/EWG(m)/EWG(m)
 PI-l/Pd-1/Po-l/Pz-6/Pab-10 IJP(c) WW/AT

ACCESSION NR: AP5013374

UR/0207/65/000/002/0079/0083

AUTHORS: Kurtmullayev, R. Kh. (Novosibirsk); Malincyskiy, V. K. (Novosibirsk);
 Nesterikhin, Yu. Ye. (Novosibirsk); Ponomarenko, A. G. (Novosibirsk)

78
76
B

TITLE: Excitation of strong collisionless shock waves in plasma

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1965, 79-83

TOPIC TAGS: shock wave, plasma, magnetic field, electron temperature, electron density, Alfvén wave, plasma shock wave

ABSTRACT: Experimental results were obtained on collisionless shock wave excitation in a plasma. The plasma was created in a conical source by a pair of 17 μ f-10 kv capacitors. The discharge lasted 5 μ sec at 350 kamps. The plasmoid

775 x 200 cm glass tube. The shock wave excitation was achieved by means of a copper coil supplied by a 0.6 μ f-50 kv capacitor bank. The discharge time was 10^{-6} μ sec. The density of the plasmoid varied between 5×10^{14} to 5×10^{16} cm^{-3} . Spectrophotometric records indicated that after the excitation coil discharge the plasma is set into periodic oscillations. X-ray measurements on the

Card 1/2

11 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 09May64

ENCL: 00

SUB CODE: ME, NP

NO REF SOV: 002

OTHER: 002

Card 2/2 MB

KURTMULLAYEV, R.Kh.; NESTERIKHIN, Yu.Ye.; PONOMARENKO, A.G.

Structure of a plasma jet produced by a conical source. Teplofiz.
vys. temp. 2 no.5:661-671 S-O '64. (MIRA 17:11)

1. Institut yadernoy fiziki Sibirskogo otdeleniya AN SSSR.

Ponomarenko, A. G.

4

USSR:

The reaction of nitrobenzene solutions of aluminum chloride with acetamides and urea. M. Ya. Rabinovich and A. G. Ponomarenko (El'y. Polytech. Inst.), *Khim. i Tekhn. Ure* (1953).— $AlCl_3 \cdot 2PhNO_2$, which is first formed in $PhNO_2$ solns. of $AlCl_3$ and $AcNH_2$ or $CO(NH_2)_2$, is in equil. with 1:1 complexes of $PhNO_2$ and the resp. amides. Since the latter compds. are more stable, equil. is shifted toward the side of their formation. When the solns. are evaporated to crystn., compds. of the type $AlCl_3 \cdot 3R(NH_2) \cdot 2PhNO_2$ are obtained ($R(NH_2)$ is $AcNH_2$ or $CO(NH_2)_2$). H. M. Lerner.

PONOMARENKO. A. G.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
General and Physical Chemistry

6
(3)
Cryoscopy of the aluminum chloride-acetamide-nitrobenzene system. B. Ya. Rabinovich and A. G. Ponomarenko (Kiev. Dnipro-Lening. Politekh. Inst.). *Zhur. Obshchei Khim.* 23, 923-6(1953).—F.p. lowerings were detd. for solns. of $AlCl_3$ in $C_6H_5NO_2$ (0.1 and 0.2M) (I), contg. 0.1–1.2M acetamide per mole of $AlCl_3$. The depression of the f.p. on addn. of acetamide to I remained practically const. until the concn. reached 0.8M/mole of $AlCl_3$; then it began to decrease. The decrease in f.p. is assoc. with the formation of a $AlCl_3 \cdot CH_3CONH_2$ complex. Degree of assocn. 1.27. A. P. Kotloby

AE
11-5-54

PONOMARENKO, A. G.

U S S R .

~~1. Crossed of the aluminum chloride-acetamide-nitro-~~
~~benzene system. B. Ya. Rabinovich and A. G. Pono-~~
~~marenko. J. Gen. Chem. U.S.S.R. 23, 981-8 (1953) (Engl.~~
~~translation).—See C.A. 48, 8109f.~~
H. L. H.

AK 824

POHOMARENKO, A.G.
RABINOVICH, B.Ya.; POHOMARENKO, A.G.

Specific gravity and viscosity of nitrobenzene solution of aluminum chloride. Ukr.khim.zhur. 19 no.3:264-266 '53. (MLRA 7:4)

1. Kiyevskiy politekhnicheskii institut, kafedra obshchey i neorganicheskoy khimii. (Aluminum chloride) (Nitrobenzene)

RABINOVICH, B.Ya.; PONOMARENKO, A.G.

Electric conductance of systems: aluminum chloride--acetamide--
nitrobenzene and aluminum chloride -- urea -- nitrobenzene.
Zhur.ob.khim. 25 no.2:255-260 P '55. (MLRA 8:6)

1. Kiyevskiy politekhnicheskii institut.
(Systems (Chemistry)--Electric properties))(Nitrobenzene)
(Aluminum chloride)

PONOMARENKO, A.G.

USSR/ Physical Chemistry - Thermodynamics. Thermochemistry. Equilibrium.
Physicochemical analysis. Phase transitions

B-8

Abs Jour : Referat Zhur - Khimiya, No 4, 1957, 11197

Author : Rabinovich B.Ya. Ponomarenko A.G.

Inst : Kiev Polytechnic Institute

Title : Cryoscopy of the Systems: Aluminum Chloride - Acetamide - Nitrobenzene
and Aluminum Chloride - Urea - Nitrobenzene

Orig Pub : Izv. Kievskogo politekhn. in-ta, 1956, 17, 191-196

Abstract : Determined was temperature depression (Δt) of 0.1 and 0.2 molal solutions of $AlCl_3$ in $C_6H_5NO_2$, containing CH_3CONH_2 or $CO(NH_2)_2$, in the concentration interval 0 - 1.2 mole amide per 1 mole $AlCl_3$. It is shown that on increase of the concentration of CH_3CONH_2 or $CO(NH_2)_2$ in the nitrobenzene solution of $AlCl_3$, from 0 to 0.8 - 0.9 mole per 1 mole $AlCl_3$, Δt remains practically constant ($\sim 0.5^\circ$). Further increase of concentration decreases Δt . On the basis of an analysis of the Δt - composition curve the conclusion is reached as to the existence of complex compound of $AlCl_3$ with $CO(NH_2)_2$ and CH_3CONH_2 at molar ratio 1:1. Decrease of Δt in the region of high concentration of amide is connected with association of monomeric molecules of the complex. Degree of association, in the case of 0.1 - 0.2 molal solutions of the complex is $\sim 1.2 - 1.3$

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S/081/62/000/023/030/120
B168/B186

AUTHORS: Bezobrazov, S. V., Ponomarenko, A. G., Agafonov, P. F.

TITLE: High-frequency heating for determination of carbon content
in alloys

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 23, 1962, 213, abstract
23E37 (In collection: Teoriya i praktika metallurgii, no. 4,
Sverdlovsk, Metallurgizdat, 1961, 181-183)

TEXT: The working principle of a h. f. furnace and of a h. f. apparatus
for heating samples is described. High-frequency heating (25-30 Mc/s) for
calcining samples for carbon determination gives more complete combustion
of difficultly oxidizable high-alloy steels and ferro-alloys. Calcination
takes place at $>1500^{\circ}\text{C}$ and is complete in $\sim 1.5-2.0$ min. Results are given
for analyses of ferrochrome by the proposed method. [Abstracter's note:
Complete translation.]

Card 1/1

GORENBEYN, Ye.Ya.; PONOMARENKO, A.G.

Complexing in the system $\text{AlBr}_3 - \text{C}_5\text{H}_5\text{N} - \text{C}_6\text{H}_5\text{NO}_2$. Zhur.neorg.khim.
6 no.8:1926-1929 Ag '61. (MIRA 14:8)

1. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk i Kiyevskiy
politekhnicheskiy Institut.
(Aluminum bromide) (Pyridine) (Nitrobenzene)

9.3150 (1049, 1163, 1502)

76.7371

30091

S/057/61/031/011/006/019
B104/B108

AUTHORS: Dubovoy, L. V., and Ponomarenko, A. G.

TITLE: Plasma parameter measurements in a magnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 11, 1961, 1302 - 1308

TEXT: The determination of plasma parameters by measurement of electromagnetic wave absorption in the frequency range of electron cyclotron resonance is investigated. The attenuation of waves in plasma is given by $\beta = 10(\log e) \frac{2\omega}{c} \left\{ \frac{vs}{(1-u)^2 + 4s^2} \right\}$. An analysis of this formula shows that ν and n_e can be determined from the shape of the absorption lines in the resonance range. Theoretical results were checked by determining $\nu(T_e) = \text{const}$ and $\nu \sim T_e^{3/2}$ from measurements of the absorption of a microwave signal in an electrodeless discharge through hydrogen and argon. ν is the frequency of collisions of electrons with other plasma components, and T_e is the electron temperature. Measurements were made

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Plasma parameter measurements in a ...

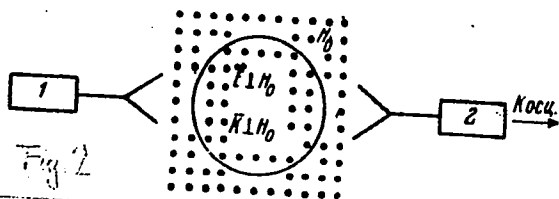
30091
S/057/61/031/011/006/019
B104/B108

S. Brown a. E. Everhart. Phys. Rev., 84, 519, 1951; B. Hill, S. J. Jetenbaum.
J. Appl. Phys., 30, 1610, 1959.

SUBMITTED: November 9, 1960

Fig. 2. Block diagram of the experimental device. Legend: (1) 3-cm ГЧС
(GSS) generator; (2) logarithmic detector.

Fig. 2



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X

DUBOVOY, L.V.; PONOMARENKO, A.G.; KORNILOV, V.A.

Plasma resonance of electrons in a magnetic field. Zhur.tekh.fiz.
32 no.7:792-797 J1 '62. (MIRA 15:8)
(Plasma (Ionized gases)) (Electrons) (Magnetic fields)

KURTMULLAYEV, R.Kh. (Novosibirsk); NESTERIKHIN, Yu.Ye (Novosibirsk);
Ponomarenko, A.G. (Novosibirsk)

Raleigh - Taylor instability in a conical plasma accelerator.
PMTF no. 6:144-146 N-D '63. (MIRA 17:7)